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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/658,425	09/10/2003	Masatoshi Anma	242614US2	3184

22850 7590 04/14/2005

OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER

HU, SHOUXIANG

ART UNIT	PAPER NUMBER
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2811

DATE MAILED: 04/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/658,425	ANMA ET AL.	
	Examiner	Art Unit	
	Shouxiang Hu	2811	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 January 2005.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 3-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

In view of previous Office actions, claim 3-14 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim.

Accordingly, claims 1-14 are pending in this application; and claims 1 and 2 remain active in this Office action.

Claim Objections

Claims 1 and 2, as being supported by the elected species, are objected to because of the following informalities and/or defects:

Claim 1 recites the term of "a lower electrode" of the recited capacitor; but, as shown in the specification and drawings (especially Fig. 2), the recited "film" (14) as supported by the elected species of the instant invention is also a part of the lower electrode of the capacitor. Thus the recited term of "a lower electrode" should read as: -
-a portion of a lower electrode--.

Appropriate correction is requested.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1, as being best understood in view of the claim objections above, is rejected under 35 U.S.C. 102(b) as being anticipated by Horii (US 2001/0055851).

Horii disclose a semiconductor device including a capacitor (Fig. 8; also see paragraphs 0031 and 0040), comprising: a (portion of a) lower electrode (34a; Pt) which has an upper surface and a side surface and has an opening on the upper surface; a film (38b; a Pt alloy) provided to cover and plug the opening; a dielectric film (48) of the capacitor facing the upper surface and the side surface of the lower electrode; and an upper electrode (50).

Claims 1 and 2, as being best understood in view of the claim objections above, are rejected or further rejected under 35 U.S.C. 102(b) as being anticipated by Yunogami (Yunogami et al., US 6,326,218).

Yunogami disclose a semiconductor device including a capacitor (Fig. 30b; also see col. 53, lines 25-28), comprising: an electrode (51) that can be regarded as being consisted of two portions: a (portion of a) lower electrode (the lower portion of 51 with a recess at the its top) which has an upper surface and a side surface and has an opening on the upper surface; a film (an upper portion of 51; Ru-Pt alloy) provided to cover and plug at least the entry of the opening (the recess), and cover the upper surface of the of the lower electrode (the lower portion of 51); a dielectric film (58) of the capacitor; and an upper electrode (121). It is noted that the electrode (51) of Yunogami

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can be regarded as being consisted of the recited lower electrode and the recited film, as the claimed invention defined in claims 1 and 2 lacks sufficient limitations to uniquely and necessarily define a traceable boundary between the recited lower electrode and the recited film, since they can be interpreted as being both formed of a same material. And, the combination of lower electrode and the film of a same material can be regarded as a single piece having two portions. Although there might have some potential implications about process limitations on how these two portions are formed, such process limitations would not carry patentable weight in the claims drawing to a structure, because distinct structure is not necessarily produced. In re Thorpe, 227 USPQ 964, 966 (Fed. Cir. 1985).

Response to Arguments

Applicant's arguments with respect to claims 1 and 2 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shouxiang Hu whose telephone number is 571-272-1654. The examiner can normally be reached on Monday through Thursday, 7:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie C. Lee can be reached on 571-272-1732. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SH
April 7, 2005

A handwritten signature in black ink, appearing to read "Shouxiang Hu", with a stylized, cursive script.

SHOUXIANG HU
PRIMARY EXAMINER